MEMORANDUM

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD • CENTRAL VALLEY REGION
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To: Jerry Bruns, Chief
SPSS unit

From: Chris Foe
Env. Spec

DATE: 13 May 1997

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Subject: *CALFED COMMENTS*

Some comments on the mercury, pesticides, agricultural ammonia and unknown toxicity actions. Overall, I think a lot of good work has been done. I particularly support the development of a comprehensive water quality program that includes actions to correct municipal, agricultural, and ecological water quality problems

Mercury Two comments. First, mercury is a problem in the Delta because some species of long lived fish accumulate mercury to levels that have resulted in consumer advisories being issued. That is the benefical use impairment. Second, quite properly, CALFED talks about the need for understanding sources and relative bioavailability. Therefore, it seems premature to conclude that mines are the only and best place to control loadings. Don't we want to acknowledge the likely importance of mines but allow the research conclusions to run the long term source control program? Maybe say for action...
Action

- Initiate program to update the existing advisory for fish consumption and reduce levels in fish below concentrations known to cause human health effects by reducing bioavailable mercury loadings to the Delta and its tributaries through source control.

See several other small comments in text.

Urban pesticides. Five comments. First, goal should be to eliminate not reduce toxicity. Second, I don't like incentives because as soon as the government stops paying the users go back to their old ways. Better to pay for the development and outreach of practical long term alternatives. Unfortunately, I don't think there is much knowledge yet about the practices responsible for major off site movement of urban pesticides. Probably someone will have to pay for development of alternate pest management practices once sources are identified. Third, the target should not be to eliminate toxicity to *Ceriodaphnia*, the most sensitive of the three species. This is because literature surveys suggest that *Ceriodaphni* a is not likely to be the most sensitive aquatic organism in our receiveing water. Unfortunately, if CALFED is going to have a program to reduce instream pesticide concentrations, they are going to have to have some sort of a goal, probably numerical, to judge success. This goal should be protective of ecosystem health. Finally, development of understanding and knowledge seem more appropriate as part of the method rather than the performance section. With these in mind I suggest the following.

Action: Eliminate toxicity from the pesticides chlorpyrifos and diazinon....

Methods:

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- Increase understanding of the ecological significance, sources and mechanisms of chlorpyrifos and diazinon transport into the Delta.
- Develop urban host management practices, including integrated pest management, to reduce off site movement of pesticides from primary sources. Develop outreach programs to educate urban pesticide users about new BMPs.
- Determine acceptable pesticide target to insure that the ecological health of aquatic community is protected.

Performance measures:

- Eliminate threat of toxicity at selected stormwater monitoring locations by comparing instream pesticide concentrations to newly developed target.

Indicator of success

- Elimination of toxicity from chlorpyrifos and diazinon in the Delta and its tributaries..

Agricultural pesticides.
Same comments apply as were given for urban pesticides. In addition, I would attempt to make actions, methods, performance measures and indications of success as similar to urban ones as possible. Do not want to appear to be treating urban and agricultural problems differently.

Agricultural Ammonia. I am not aware of much data suggesting that ammonia from dairies, or agricultural field fertilization is much of a water quality problem in Delta or main Central Valley waterways. I do not believe that ammonia objectives will be promulgated as part of the EPA 304 (a) list; there is a published EPA ammonia criteria document though.

Unknown toxicity. I rewrote this action with an emphasis on identification and elimination of "unknown" toxicity.
Action:

- Implement actions to identify and eliminate toxicity in water and sediment within the Delta and its tributaries.

Method:

- Develop a comprehensive surface and sediment toxicity testing program employing both the standard EPA 3 species test and several local organisms.
- Conduct Toxicity Identification Evaluations and/or other directed studies to determine the chemical cause, source(s), and ecological significance of the toxicity.
- Develop and implement control actions to eliminate all ecologically significant toxicity.
- Coodinate efforts with other monitoring programs.

Performance Measures

- Number of bioassays and successful Toxicity identification Evaluations conducted.
- Identification and successful implementation of control measures to reduce identified toxicants.

Indication of Success

- Elimination of all significant toxicity in the Delta and its tributaries